

# Having a dialysis line inserted (Permcath)

Renal and Transplant Services

Information for Patients

Produced: December 2023

Review: December 2026

Leaflet number: 1454 Version: 1.1

## Introduction

This leaflet tells you about having a dialysis line (Permcath) inserted for haemodialysis treatment. Please read this but you should also talk to your doctor/nurse.

## What is a dialysis line?

A dialysis line is a soft plastic tube about the width of a standard pencil and twice as long. It is placed through the skin into one of the large veins in your neck or groin.

Once the dialysis line has been inserted and secured, it will let your dialysis team access your blood so that it can be filtered by the haemodialysis machine. Your blood is then returned to your body through the catheter.

## Why do I need to have it done?

You need to have a dialysis line because blood tests have shown your kidneys are not working well enough.

Dialysis treatment removes the toxins (poisons) and fluid that the kidneys cannot get rid of.

Your doctor feels that a dialysis line (Permcath) is needed as that you need haemodialysis for longer than 4 weeks.

## Where is it done?

- The dialysis line (Permcath) insertion will usually be carried out in the kidney department, sometimes in the X-ray department or the operating theatre.

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

Visit [www.leicestershospitals.nhs.uk](http://www.leicestershospitals.nhs.uk) for maps and information about visiting Leicester's Hospitals  
To give feedback about this information sheet, contact [InformationForPatients@uhl-tr.nhs.uk](mailto:InformationForPatients@uhl-tr.nhs.uk)

- It will usually take around 45 minutes.
- It is done under local anaesthetic, so you will be awake during the procedure.
- You can eat and drink normally before and after the procedure.

## **How is it done?**

- Your doctor/nurse practitioner will explain what will happen and answer any questions you may have.
- They will ask for your consent to the procedure.
- You will be asked to change into a hospital gown and lie flat on your back. The bed or couch you are lying on may be tilted so that your head is a little below your feet.
- You will also be attached to a heart monitor.
- The skin over the veins in your neck or groin will be cleaned with antiseptic.
- A large sterile drape will be used to cover the surrounding area.
- Some local anaesthetic is injected into the skin. This can feel like a 'bee sting'. It may sting for 1 to 2 seconds before going numb.
- Once the skin is numb, more local anaesthetic is injected around the vein.
- Usually the doctor or nurse practitioner will find the exact position of the vein using an ultrasound scan.
- They will put a special needle through the numb skin into the vein.
- The doctor or nurse practitioner will pass a thin wire through the needle into the vein. The needle will be taken out.
- A small cut will be made at the insertion point, about 1cm in length. The dialysis line is then placed through the skin and into the vein by passing it over the wire. You may feel a slight pushing at this point.
- Once the dialysis line has been put in, the wire is removed. The line (Permcath) will be held in place by small stitches and a sterile dressing will be placed over the exit site.
- The skin at the insertion point is closed with (dissolvable) stitches (sutures). A sterile dressing is placed over it.

## **What happens afterwards?**

- Once the line has been inserted, you will be returned to your bed for further checks and bed rest for 1 hour and if everything is fine, you will be discharged home.
- If the dialysis line has been placed into a vein in the neck you will then have a chest X-ray to make sure it is in the right position and that no damage to the lung has occurred.
- After the local anaesthetic has worn off you may feel a little pressure or discomfort around the dialysis line due to slight bruising.

- After the dialysis line insertion you should avoid strenuous exercise for a week.
- The area of skin, where the line has been inserted, must be kept dry. You should not have a bath, shower or swim until the wound heals. This is because the risk of infection increases if the line and exit site are allowed to get wet at this stage.
- After the wound has healed, you can take a shower. Make sure that the exit site is kept dry. If needed, apply a new dressing afterwards which you can get from your dialysis unit.
- Special pouches are available to protect the line while you shower. Please ask your dialysis nurse if you would like to try these.
- If you get bad pain or bleeding around the dialysis line you should contact the kidney unit straight away. If the bleeding carries on you should press over the area and seek help straight away.

## Are there any risks to having a dialysis line (Permcath) inserted?

Most haemodialysis catheters are put in without any problems. However, as with any procedure, there are potential risks. Your doctor or nurse practitioner will discuss these with you before the procedure.

The most serious risks from the dialysis line insertion include:

**Bleeding:** This is usually mild and stops quickly. Less commonly, the dialysis line insertion may cause a lot of bleeding that you might need a blood transfusion. On very rare occasions, an operation may be needed to stop the bleeding. The chance of this happening is less than 1 in 1000.

**Lung injury:** In rare cases, dialysis line insertion may cause puncture of the lung. In case of a lung puncture, you might need to have a tube inserted into your chest for a few days to let the lung to expand. Very occasionally (less than 1 in 1000), an operation would be needed to repair the puncture.

**Injury to an artery or other structures:** The needle, guide wire or dialysis line could cause injury to the artery or other surrounding structures such nerves or other veins. If the artery is accidentally punctured, pressure will be applied. This is usually enough to stop the bleeding. Very rarely, an operation or radiological procedure may be needed to repair the hole in the artery .

The risks mentioned are reduced by using an ultrasound or X-ray machine so that the doctor/ nurse practitioner can directly see where the line is being inserted.

Other risks to be aware of include:

**Infection:** Once the dialysis line has been inserted, there is a risk that infection can spread from the catheter into the bloodstream causing a blood infection (septicaemia). This is very unlikely to happen at the time of the dialysis line insertion. It can be prevented by keeping the area around the line as clean as possible.

Sometimes, the line may need to be replaced if a hole develops in the tube. This is very rare and usually occurs when the line has been in place for more than a year .

**Irregular heart rhythm:** Another risk to be aware of is the small risk of triggering an irregular rhythm (extra beats) of the heart while inserting dialysis line in the neck. This is why we will check on your heart risk all the time during the procedure, using small sticky ECG pads on the chest.

These usually stop once the guidewire position is adjusted and are generally short-lived.

**Failed attempt:** Sometimes it will not be possible to put in the dialysis line because the vein cannot be found or is damaged. In this case a different vein will be assessed and discussed with you. The line may have to be inserted in the X-ray department with X-ray guidance.

**Others:** Although deaths have occurred after complications as a result of dialysis line insertion, this is extremely rare. Over time, the line can over time become blocked by clotted blood. If this happens, medication can be given into the line to unblock it. Sometimes the line will need to be replaced.

If you have a line inserted as an inpatient, you will be given a tube of antibacterial nose cream called mupirocin to apply inside your nostrils 3 times a day for the length of your stay in hospital.

It is important that you tell your doctor if you have a problem with easy bleeding or bruising, or if you are taking tablets that can affect bleeding such as **warfarin, aspirin, clopidogrel**, or other agents like **apixaban**. You should also tell your doctor if you are allergic to antiseptic such as **iodine**.

## What are the benefits?

Once the dialysis line has been inserted and position confirmed, you can be started on dialysis to clear the toxins (waste products) from your blood.

## What are the other choices?

A fistula or graft is the preferred way of accessing your bloodstream for dialysis. A fistula usually takes between 6 to 8 weeks to develop, before it can be used for dialysis. A plan for having a fistula operation is usually arranged well before you need dialysis. However, a Permcath may be used if dialysis is needed urgently before this happens. Your doctor/nurse practitioner will talk to you about this before inserting a dialysis line (Permcath).

There is another form of dialysis. It can be done by inserting a tube through the skin in the tummy (abdomen) into the space that holds the intestine (bowels, guts). This type of treatment called peritoneal dialysis.

The other choices to dialysis to treat severe kidney failure, such as drugs and changes in diet, usually do not stop the complications of kidney failure. Your doctor or nurse should be able to tell you what changes and treatment could be made for your kidney failure should you decide not to have dialysis.

## Consent

If you agree to have a dialysis line, you will be asked to sign the hospital's consent form. This will also state that you have had information about the procedure and have discussed it with your doctor or nurse practitioner.

## More information

- Kidney Care UK: [www.kidneycareuk.org](http://www.kidneycareuk.org)
- National Kidney Federation:  
[www.kidney.org.uk](http://www.kidney.org.uk) / email: [nkf@kidney.org.uk](mailto:nkf@kidney.org.uk)
- The National Kidney Foundation: [www.kidney.org](http://www.kidney.org)

## Useful contact numbers

Useful contact for your local dialysis unit:

Leicester Dialysis Unit:	0116 258 4135
Hamilton Dialysis Unit:	0116 246 4176
Loughborough Dialysis Unit:	01509 564270
Northampton Dialysis Unit:	01604 628976
Kettering Dialysis Unit:	01536 492974
Peterborough Dialysis Unit:	07921 545385
Lincoln Dialysis Unit:	01522 572321
Skegness Dialysis Unit:	01754 762220
Boston Dialysis Unit:	01205 316401

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔  
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل

જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।

Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

Previous reference:

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email [equality@uhl-tr.nhs.uk](mailto:equality@uhl-tr.nhs.uk)